

Abstract

The invention relates to the field of chemistry and relates to radically coupled PTFE polymer powders that can be used, for example, as tribomaterials, and a method for the production thereof. The object of the invention is to disclose radically coupled PTFE polymer powders which, when incorporated into a matrix as PTFE polymer compound, exhibit improved wear resistances, and furthermore a simple and efficient method for the production thereof. The object is attained through radically coupled PTFE polymer powders comprising radiation-chemically and/or plasma-chemically modified PTFE powders, onto the particle surface of which homopolymers, copolymers or terpolymers are radically coupled via a reaction in dispersion or in substance. The object is further attained through a method in which PTFE powders with reactive perfluoroalkyl-(peroxy) radical centers after a radiation-chemical and/or plasma-chemical modification are reacted in dispersion or in substance with the addition of polymerizable, olefinically unsaturated monomers, whereby during the reaction a polymer-forming reaction is.